ABSTRACT

It is an object of the present invention to improve the performance of gradient liquid transfer in nano/micro liquid chromatographs when solvents are mixed.

In a gradient liquid transfer device and method for a nano/micro liquid chromatograph, an opening and closing unit (160) capable of opening and closing a solvent passage (150) for transferring a secondary solvent is provided in the vicinity of a solvent mixing section (152) in a liquid transfer system (130); a passage from a metering pump (146) of a liquid transfer section (142) to the opening and closing unit (160) is filled with the secondary solvent in advance; and an appropriate pressure is applied to the secondary solvent. Therefore, the entry of a primary solvent into the solvent passage for transferring the secondary solvent is suppressed. In another gradient liquid transfer device and method for a nano/micro liquid chromatograph, a liquid having a low compression rate is filled, in advance, in a part of a solvent passage subsequent to a metering pump of a liquid transfer section, and only the required amount of a secondary solvent is filled subsequent to the liquid. Therefore, the entry of the primary solvent into a solvent passage for transferring the secondary solvent is suppressed, and liquid-transfer performance is improved.